

IN THE CLAIMS:

Please amend claims 1, 2 and 3, to read as follows, and add new claims 10 - 20 as shown below:

1. (Amended) An isolated mutant kanamycin nucleotidyltransferase comprising the sequence of SEQ ID NO:1 modified by at least one point mutation selected from Met57Leu, Ser94Pro, Ser203Pro, Asp206Val, His207Gln, Ser220Pro, Ile234Val, and Thr238Ala, and having improved thermostability as compared to SEQ ID NO:1.

C3
2. (Amended) A mutant kanamycin nucleotidyltransferase with improved thermostability as compared to SEQ ID NO:1, comprising the amino acid sequence indicated by SEQ ID NO:2.

3. (Amended) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:3.

10. (New) An isolated mutant kanamycin nucleotidyltransferase comprising the sequence of SEQ ID NO:1 modified by at least one point mutation selected from Met57Leu, Ala62Val, Ser94Pro, Ser203Pro, Asp206Val, His207Gln, Ser220Pro, Ile234Val, and Thr238Ala, and having improved thermostability as compared to SEQ ID NO:1, wherein the sequence of SEQ ID NO:1 is not modified by any other mutations.

11. (New) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:12.

12. (New) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:13.

13. (New) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:14.

14. (New) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:15.

C4

15. (New) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:16.

16. (New) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:17.

17. (New) The mutant kanamycin nucleotidyltransferase according to claim 1, comprising the amino acid sequence indicated by SEQ ID NO:18.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com